PROJECT facts
U.S. Department of Energy
National Energy Research Laboratory

Materials and Advanced Metallurgical Research
11/2001

Novel Processing of Mo-Si-B Intermetallics for Improved Efficiency of Power Systems

Project Lead
Ames National Laboratory
Ames, IA

Description
Duration: 10/1/00 - 9/30/01

The Mo-Si-B system offers a variety of in-situ composite microstructures that possess excellent oxidation resistance, superior creep resistance, and semi-metallic electrical conductivity. Work at Ames Laboratory has shown that components based on the Mo-Si-B system offer the potential for operating temperatures to at least 1600°C in air. The proposed work will concentrate on novel processing and characterization methods to develop alloys for components in heat exchangers and non-load bearing components in gas turbines that can withstand operating temperatures in excess of 1600°C under normal operating conditions for 1000 hours or more.

Product Support Areas

Gasification Technologies	Combustion Technologies	Sequestration	Environmental & Water Resources	Advanced Turbine & Engines	Fuel Cells
✓	✓			✓	

Project: FEAA08A
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